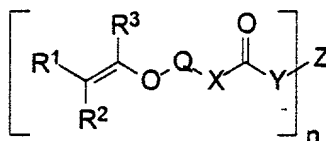


We Claim:

1. A die attach adhesive comprising
- (a) 5 to 30 weight percent of a mixture of a vinyl ether compound
- 5 containing polar functionality and an electron acceptor compound,
- (b) 0.01 to 10.0 weight percent of a free-radical initiator or photoinitiator,
- (c) 70 to 95 weight percent of a conductive or nonconductive filler,
- to a total of 100 weight percent,
- 10 in which the vinyl ether has the structure



in which

n is 1 to 6;

R¹, R², and R³ are hydrogen, methyl or ethyl;

- 15 Q is an alkyl or cycloalkyl linear or branched chain having 1 to 12 carbon atoms; an alkyleneoxy chain having 1 to 12 carbon atoms, or aromatic or fused aromatic ring having 3 to 10 carbon atoms and optionally containing the heteroatoms O, N or S;

- X and Y are independently O, NR¹, or S, with the proviso that both X
- 20 and Y cannot be oxygen or sulfur;

Z is a branched or linear alkane, which may contain cyclic moieties, a siloxane, a polysiloxane, a C₁ to C₄ alkoxy-terminated siloxane or polysiloxane, a polyether, a polyester, a polyurethane, a poly(butadiene), or an aromatic, polyaromatic, or heteroaromatic group.

25

2. The die attach adhesive according to claim 1 in which

R^1 , R^2 , and R^3 are hydrogen,

Q is a linear or branched chain alkyl having 1 to 12 carbon atoms:

and

5 Z is a linear or branched chain alkyl having up to 36 carbon atoms.

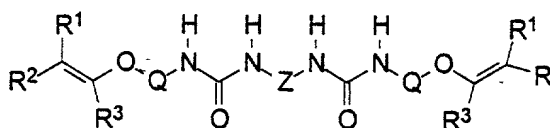
3. The die attach adhesive according to claim 1 in which the filler is a conductive filler.

10 4. The die attach adhesive according to claim 3 in which the filler is silver.

5. The die attach adhesive according to claim 1 in which the filler is tetrafluoroethylene.

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6. A vinyl ether compound having the structure:



20 in which

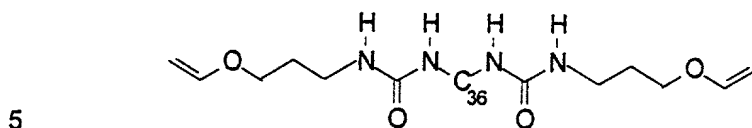
R¹, R², and R³ are independently hydrogen, a methyl group, or an ethyl group;

Q is an alkyl or alkylenoxy linear or branched chain having 1 to 12 carbon atoms;

25 Z is a branched or linear alkane, which may contain cyclic moieties, a siloxane, a polysiloxane, a C₁ to C₄ alkoxy-terminated siloxane or

polysiloxane, a polyether, a polyester, a polyurethane, a poly(butadiene), or an aromatic, polyaromatic, or heteroaromatic group.

7. The vinyl ether compound according to claim 5 having the structure



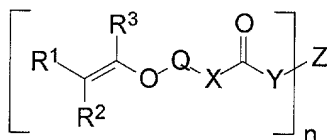
in which C₃₆ is a mixture of isomers of a 36 carbon linear or branched chain.

8. An adhesive composition containing the vinyl ether compound according to claim 5, a free radical initiator or photoinitiator, and optionally a
- 10 conductive or nonconductive filler.

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CLEAN VERSION OF CLAIMS NOW PENDING

9. An adhesive composition comprising a mixture of a maleimide compound and a vinyl ether compound, in which the vinyl ether compound has the structure



in which

n is 1 to 6;

R¹, R², and R³ are hydrogen, methyl or ethyl;

Q is a linear or branched chain alkyl or cycloalkyl having 1 to 12 carbon atoms; an alkyleneoxy chain having 1 to 12 carbon atoms, or aromatic or fused aromatic ring having 3 to 10 carbon atoms and optionally containing the heteroatoms O, N or S;

X and Y are independently O, NR¹, or S, with the proviso that both X and Y cannot be oxygen or sulfur;

Z is a branched or linear alkane, which may contain cyclic moieties, a siloxane, a polysiloxane, a C₁ to C₄ alkoxy-terminated siloxane or polysiloxane, a polyether, a polyester, a polyurethane, a poly(butadiene), or an aromatic, polyaromatic, or heteroaromatic group.

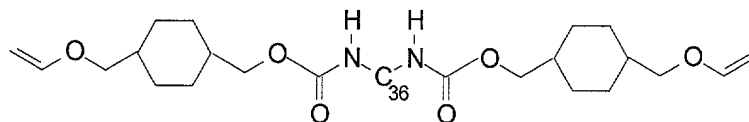
10. The adhesive composition according to claim 9 in which for the vinyl ether compound:

R¹, R², and R³ are hydrogen,

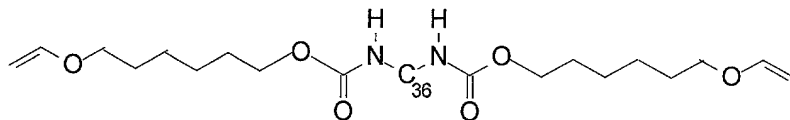
Q is a linear or branched chain alkyl or cycloalkyl having 1 to 12 carbon atoms; and

Z is a linear or branched chain alkyl having up to 36 carbon atoms.

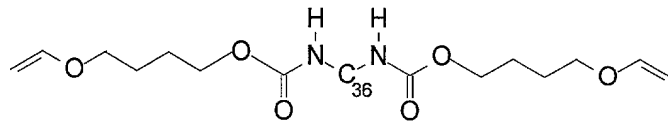
11. The adhesive composition according to claim 9 in which the vinyl ether compound has the structure:



12. The adhesive composition according to claim 9 in which the vinyl ether compound has the structure:



13. The adhesive composition according to claim 9 in which the vinyl ether compound has the structure:



14. The adhesive composition according to claim 9 in which the vinyl ether compound has the structure:

